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WE CLAIM AS OUR INVENTION:

A wayside rail lubrication apparatus comprising:

a sensor associated with a first position on a rail for producing a lubrication signal when a locomotive pulling a plurality of load cars passes the first position; and a lubricant dispensing apparatus for applying a lubricant to the rail at a second position on the rail in response to the lubrication signal, the lubricant adapted to reduce the friction between wheels of the load cars and the rail, the first position and the second position being separated by a distance on the rail sufficient to prevent the lubricant from contacting drive wheels of the locomotive.

2. The wayside rail lubrication apparatus of claim 1, the lubricant dispensing apparatus further comprising:

a lubricant container for storing a volume of lubricant;

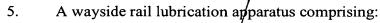
- a pump for delivering lubricant from the lubricant container to the rail; and a refilling device for adding lubricant to the lubricant container at no more than a predetermined rate.
- 3. The wayside rail lubrication apparatus of claim 1, further comprising a bypass device for selectively preventing the lubricant dispensing apparatus from applying the lubricant in response to the lubrication signal.
- 4. The wayside rail lubrication apparatus of claim 1, further comprising a means for terminating the application of the lubricant to the rail by the lubricant dispensing apparatus before a number of the load cars at a rear of the train pass the second position.

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a detection apparatus for providing a lubrication signal in response to the presence of a vehicle on a rail;

a lubricant dispensing apparatus for applying a lubricant to the rail in response to the lubrication signal; and

a bypass device for selectively/preventing the lubricant dispensing apparatus from applying the lubricant in response to the lubrication signal.

- 6. The wayside rail lubrication apparatus of claim 5, wherein the bypass device comprises a device located in the vehicle for controlling the bypass device from the vehicle.
- 7. The wayside rail lubrication apparatus of claim 5, wherein the bypass device comprises a remote signal reception device for receiving a signal from a remote location for controlling the bypass device.
- 8. The wayside rail lubrication apparatus of claim 5, wherein the bypass device comprises an environmental sensor for preventing the lubricant dispensing apparatus from applying the lubricant in response to a predetermined environmental condition.
- 9. A ways de rail lubrication apparatus comprising:
 a lubricant dispensing apparatus for applying lubricant to a rail; and
 a means for controlling an amount of lubricant applied by the lubricant
 dispensing apparatus over a predetermined time period.
- 10. The wayside rail lubrication apparatus of claim 9, wherein the means for controlling further comprises:

a timer for providing a time signal; and

a controller for controlling the operation of the lubricant dispensing apparatus in response to the time signal.

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11. The wayside rail lubrication apparatus of claim 9, further comprising: a lubricant container;

a pump for delivering lubricant from the lubricant container to the rail; and a device for refilling the lubricant container with lubricant at no more than a predetermined rate.

,12. A wayside rail lubrication apparatus comprising:

a means for applying lubricant to a rail/in response to the presence of a vehicle wheel at a location on the rail; and

a means for delay associated with the means for applying lubricant for delaying the application of lubricant for a time period after the vehicle wheel is present at the location on the rail.

- 13. The wayside rail lubrication apparatus of claim 12, wherein the means for delay comprises an empty volume downstream of a lubricant pump.
 - /14. A wayside rail lubrication apparatus comprising:

a sensor for producing a lubrication signal responsive to the presence of a train on a rail, the train comprising a locomotive pulling a plurality of load cars; and

a means for applying a Jubricant to a section of the rail in response to the lubrication signal only after the locomotive has passed the section of rail.

- 15. The wayside fail lubrication apparatus of claim 14, wherein the means for applying further comprises a timer for delaying a start of application of the lubricant to the section of rail for a predetermined time period after generation of the lubrication signal.
- 16. The way ide rail lubrication apparatus of claim 14, further comprising: a means for detecting an end of the train; and a means for terminating the application of lubricant to the section of rail before the end of the train passes the section of rail.

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17. A method of applying lubricant to a rail, the method comprising: applying a first quantity of lubricant to a rail at a first time in response to the presence of a first rail vehicle;

sensing the presence of a second rail vehicle at a second time; and applying a second quantity of lubricant to the rail at a second time in response to the presence of a second rail vehicle, the second quantity of lubricant being responsive to the time span between the first time and the second time.

- 18. The method of claim 17, further comprising applying a zero quantity of lubricant for the second quantity if the time span has not exceeded a predetermined minimum.
 - 19. A method of applying lubricant to a rail, the method comprising: sensing the presence of a train on a rail;

applying a lubricant to a section of the rail in response to the presence of the train after a locomotive at a head of the train has passed the section of rail; and

terminating the application of lubricant to the section of rail before an end of the train passes the section of rail so that the quantity of lubricant on the section of rail is reduced by wheels of a plurality of cars proximate the end of the train.

20. The method of claim 19, further comprising:

detecting the end of the train proximate a position of the rail a predetermined distance from a position of a lubricant applicator; and

terminating application of the lubricant by the lubricant applicator in response to the detection of the end of the train.

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